

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington DC 20554**

In the Matter of

Biennial Regulatory Review –
Amendments of Parts 1, 22, 24, 27 and 90
to Streamline and Harmonize Various
Rules Affecting Wireless Radio Services

WT Docket No. 03-264

REPLY COMMENTS OF MOTOROLA, INC.

Motorola, Inc. (“Motorola”) hereby replies to the comments submitted in response to the FCC’s Notice of Proposed Rule Making in the above-captioned proceeding.¹

The instant proceeding is intended to eliminate or modify rules that treat wireless radio service licensees differently, or have become outdated as a result of technological change, supervening changes to related Commission rules or increased competition. In its opening round comments, Motorola indicated its general support for the FCC’s continuing efforts to update its rules to ensure that maximum public benefit is derived from the use of the radio spectrum.

With regard to the specific proposals contained in the *Notice*, Motorola supported revising the power limitations in Section 24.232(a) and Section 27.50(d)(1) that are applicable to the broadband PCS and advanced wireless services (AWS). More specifically, Motorola urged the FCC to eliminate the 100-watt transmitter output power limitation in Section 24.232(a) and to apply the existing EIRP limits on a per 1 MHz

¹ *In the Matter of Biennial Regulatory Review – Amendment of Parts 1, 22, 24, 27, and 90 to Streamline and Harmonize Various Rules Affecting Wireless Radio Services*, Notice of Proposed Rule Making, WT Docket No. 03-264, FCC 03-334, 69 Fed. Reg. 8132 (2004) (“*NPRM*” or “*Notice*”).

basis for carrier bandwidths exceeding 1 MHz to eliminate a bias against wider bandwidth technologies.² Motorola also supported the Commission's proposals to modify certain Part 90 emissions mask limitations and eliminate the Part 90 restrictions on power and antenna height associated with suburban 800 MHz and 900 MHz systems.³ Finally, Motorola urged the FCC to update the Part 90 station identification rules to allow 700 MHz licensees to transmit call signs in the digital mode.⁴

Twelve other parties filed comments responding to the *NPRM*. One issue generating significant attention concerned the proposed modification of the required transmitter output power for broadband PCS devices. As stated earlier, Motorola recommended that the FCC modify Section 24.232(a) in a technology-neutral fashion by adopting a maximum power limit of 1640 Watts/MHz EIRP per carrier for carriers of bandwidth 1 MHz or greater and 1640 Watts EIRP per carrier for carriers less than 1 MHz in bandwidth. This would allow for the use of wider band technologies without incurring a significant power penalty that would require deployment of additional infrastructure, while maintaining the ability of narrow-band carriers to use currently permitted power levels.

² Comments of Motorola, WT Docket No. 03-264, submitted April 23, 2004, at 2-4.

³ *Id.* at 5, 6.

⁴ *Id.* at 7-9.

Five commenters in addition to Motorola addressed these power limitations⁵

Among these commenters, there was strong support for Motorola's positions that:

1. the existing 100 watt restriction on transmitter output power should be eliminated in favor of an EIRP limit;⁶
2. power limits should be applied on a per-carrier basis rather than a per-transmitter or per-base station basis;⁷ and,
3. that use of power spectral density limit provides a more technology neutral approach than the current limit.⁸

⁵ See, Comments of Ericsson, Inc., at 1-10 ("Ericsson Comments"); Comments Of Cingular Wireless LLC, at 3-5 ("Cingular Comments"); Comments of Powerwave Technologies, Inc., at 1-11 ("Powerwave Comments"); Comments Of Qualcomm Incorporated, at 5-9 ("Qualcomm Comments"); Comments Of Lucent Technologies Inc., at 1-2 ("Lucent Comments").

⁶ See, Ericsson Comments at 3 ("*Ericsson urges the Commission to eliminate the transmitter output power limit entirely . . . the limit no longer serves its original purpose*"); Qualcomm Comments at 7 ("*a spectral power density limit would be technology neutral, in keeping with Commission policy, and would be the most equitable and effective way to regulate base station output power*"); Powerwave Comments at 6 ("*Powerwave had advocated the elimination of output power limits due to confusion over how and where such output should be measured*"); and, Lucent Comments at 2 ("*a requirement on maximum transmitter power is not necessary to control interference as interference levels are constrained by limits on radiated power or, more directly, by maximum out-of-band energy requirements*").

⁷ See Ericsson Ericsson at 7 ("*the Commission should modify the transmitter output limit to apply on a per-carrier basis to ensure that the rule does not discourage development of new technologies that permit operators to combine power amplifiers*"); Powerwave Comments at 8 ("*establishing an EIRP limit on a 'per carrier' basis would not alter any protocol mix because the concept is both unambiguous and well understood to all PCS licensees irrespective of the protocol used in their systems*"); Lucent Comments at 1 ("*Powerwave's interpretation of the Rule such that the limit of 1640 watts EIRP is defined on a per carrier basis – and not on total base station power – correctly reflects the Commission's previous clarification of the Rule and, importantly, the manner in which the Rule is used within the wireless industry*"); Cingular Comments at 4, 5 ("*monitoring output power on a 'per RF carrier' basis is relatively straightforward and usually is not difficult or expensive for the PCS licensee*").

⁸ See Qualcomm Comments at 7 ("*a spectral power density limit would be technology neutral, in keeping with Commission policy, and would be the most equitable and effective way to regulate base station output power*"); Lucent Comments at 2 ("*a more appropriate requirement would define and limit power measured as a power spectral density*").

Despite this support among by commenters on various aspects associated with regulating the power requirements of wireless systems, the comments also reflected important differences in the details of their recommended rule changes. Motorola believes that much of these differences have to do with differing interpretations of technical terminology and, perhaps, the existing FCC rules. Motorola further believes that significant progress toward a common industry position can be achieved with further dialog between the affected parties. To that end, Motorola has been in contact with all of the parties addressing this proposal and finds a widespread willingness to further cooperate in the development of industry common recommendations that would be provided for consideration by the Commission. Motorola intends to work with these and any other interested parties and is optimistic that a common position can be reached and jointly presented to the Commission in a timely manner.

There were no conflicting comments submitted in response to the other positions that Motorola raised in its comments. Motorola therefore reiterates its recommendation that the FCC eliminate existing Section 90.210(g)(1), which imposes limitations on emissions that are contained within the authorized channel bandwidth of the transmission.⁹ Further, other commenting parties agreed with Motorola's position that the Commission should modify Section 90.635 of the rules to no longer mandate differing power and antenna height requirements for "urban" and "suburban" conventional systems and, also, to eliminate the requirement that "suburban"

⁹ Nextel also filed comments in support of this revision arguing that "*elimination of this rule will afford greater flexibility to manufacturers and will conform this emission mask rule with other emission mask provisions applicable to Part 90 services.*" Comments Of Nextel Communications, Inc. at 5 ("Nextel Comments").

conventional systems have operational service areas less than 32 kilometers.¹⁰ FCC adoption of these recommendations will eliminate unnecessary requirements and clarify operational requirements for licensees.

Finally, Motorola reiterates its recommendation that the Commission address the station identification rules applicable to 700 MHz public safety licensees.¹¹ Unlike the rules for 800 MHz public safety licensees operating digital transmitting equipment on exclusive channels, the rules do not explicitly provide similarly situated 700 MHz licensees with the ability to transmit their station identification in the digital mode. This is in contrast to the FCC's determination that such a requirement results in operational inefficiencies. Therefore, the rules should be corrected to eliminate this unintentional bias against 700 MHz licensees. Motorola therefore urges that the Commission take the necessary steps to ensure that the provisions of existing Section 90.647(c) apply to 700 MHz licensees. As explained in Motorola's opening comments, such a change should be viewed as an administrative correction and not subject to the notice and comment requirements of the Administrative Procedures Act.

¹⁰ See e.g., Nextel Comments at 7 ("*Nextel agrees that the distinction between urban and suburban sites, for purposes of setting power and height restrictions, is no longer necessary*"); Comments Of The American Mobile Telecommunications Association, Inc. at 4 ("*several decades of experience have confirmed that there is no bright line distinction between the operational requirements of systems in these two areas*"); Comments of National Association of Manufacturers and MRFAC, Inc. at 4 ("*the change would eliminate the imposition of unnecessary regulatory burdens and costs on incumbent licensees which might otherwise be forced to spend capital on multiple antenna sites where coverage from one, higher-powered site and/or higher-mounted antenna would do the job*").

¹¹ Comments of Motorola at 7-9.

Motorola commends the Commission for its continuing efforts to update and improve its rules and urges it to act expeditiously to implement the changes recommended herein.

Respectfully submitted,
Motorola, Inc.

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